UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,968	04/20/2001	Michael B. Foster	RENAS/03	1662

7590 07/16/2002

Wood, Herron & Evans, L.L.P.
2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202-2917

EXAMINER	
KAM, CHIH MIN	
ART UNIT	PAPER NUMBER
1653	6

DATE MAILED: 07/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/838,968	FOSTER, MICHAEL B.	
	Examiner	Art Unit	
	Chih-Min Kam	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Status of the Claims

1. Claims 1-19 are pending.

Applicants' amendment filed on April 26, 2002 (Paper No. 5) is acknowledged, and applicants' response has been fully considered. Claims 11, 12 and 17 have been amended, and a new claim 19 has been added.

Rejection Withdrawn

Claim Rejections - 35 USC § 112

2. The previous rejection of claims 1-18 under 35 U.S.C. 112 second paragraph, regarding the term "a response", "daily basis", "at least one serially increased initial dose of said agent" or "optimal dose", is withdrawn in view of applicants' response at pages 4-5 in Paper No. 5.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-19 are indefinite because of the use of the term "an agent consisting essentially of". The term "an agent consisting essentially of" renders the claim indefinite, it is not clear what else is included in the agent of recombinant hGH as to "consisting essentially of", use of the term "an agent consisting of" is suggested. Claims 2-9, 11-13 and 15-19 are included in this

rejection for being dependent on rejected claims and not correcting the deficiency of the claims from which they depend.

In response, applicant indicates the composition does not include other hormones or other bioactive compounds (page 3, lines 19-21 and page 5, lines 16-19 of the specification; page 4 of the response). The argument is not persuasive because the term "an agent consisting essentially of" is recited in the claim, which reads as "comprising" and the term indicating the inclusion of other ingredient(s).

4. Claims 2, 3, 11, 15 and 16 are indefinite because of the use of the term "said maintenance dose is administered monthly" or "said dose producing said optimal response is administered monthly". The term "said maintenance dose is administered monthly" or "said dose producing said optimal response is administered monthly" renders the claim indefinite, it is unclear why and how the same daily maintenance dose is administered monthly. Claims 3 and 16 are included in this rejection for being dependent on rejected claims and not correcting the deficiency of the claims from which they depend.

In response, applicant asserts the terms indicate the maintenance dose could be administered on a monthly as opposed to a daily basis (page 7, lines 1-9 of specification; page 5 of the response). The argument is not persuasive because "said maintenance dose" is recited as a daily dose in the claim, as indicated in the specification, if a monthly maintenance dose is administered, it has to be calculated based on the individualized bioavailability data, not the same daily maintenance dose.

5. Claim 5, for example, is indefinite because of the use of the term "about". The term "about" renders the claim indefinite, it is unclear what is the maintenance dose, e.g., is it between

10 to 14 μg/kg/day as to "in the range of", or, is it below 10 μg/kg/day or above 14 μg/kg/day as to "about". See also claims 6, 8, 9 and 14-18. Claims 15-18 are included in this rejection for being dependent on rejected claims and not correcting the deficiency of the claims from which they depend.

In response, applicant indicate the specification discloses the proper initial or maintenance dose is determined based on individual's IGF-1 levels or individual's response to previous dosage, where the specific range of the dosage is indicated for a female or a male (page 5 of the response). The argument is not persuasive because the term "in the range of about" is recited in the claim, which indicates the dose can be in the specific range or outside the range as discussed above.

6. Claim 12 recites the limitation "bioavailability data" in line 1. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 17 recites the limitation "bioavailability data" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 4-10, 12-14, 18 and 19 remain rejected under 35 U.S.C. 102(b) as being anticipated by Chein (U. S. Patent 5,855,920).

Chein teaches a method for replenishing human growth hormone (hGH) in an adult; said method comprising determining the levels of insulin-like growth factor-1 (IGF-1, Somatomedin C) in response to an initial dose of hGH (Col. 10, lines 21-26; Table II; claims 1 (step 1) and 7), and adjusting the dose of hGH until target levels of IGF-1 are achieved by serially increasing doses of hGH administered daily (Col. 11, lines 55-60; Tables III-IV; claim 1 (steps 2 & 3)), establishing the dosage of hGH needed to maintain target IGF-1 levels, and administering the established dose of hGH indefinitely (Col. 11, lines 60-63; Claim 1 (step 4)). Chein teaches that the dose of hGH is to be administered at low dose-high frequency, twice daily (claim 4). Table III of the reference teaches the administration of hGH to males at less than 0.5 mg/day (Col. 12, line 16). Assuming 70 kg (185 lbs), 500 μg/70 kg = 7.1 μg/kg/day, the maintenance dose is "about" 10-14 μg/kg/day (claim 5). Table IV of the reference teaches the administration of hGH to females at less than 0.5 mg/day (Col. 12, line 16). Assuming 48 kg (130 lbs), 500 μg/48 kg = 10.4 μg/kg/day, the maintenance dose is "about" 14-20 μg/kg/day (claim 6). While Chein does not disclose the initial dose of hGH, this dose is less than the maintenance dose. Therefore, Chein discloses administering to males an initial dose of "about" 2 μg/kg/day (claim 8) and to females an initial dose of "about" 4 μg/kg/day (claim 9).

Chein also teaches a method for providing an adult with hGH; said method comprising determining the levels of IGF-1 in response to an initial dose of hGH (Col. 10, lines 21-26; Table II, claim 13), adjusting the dose of hGH until target levels of IGF-1 are achieved by serially increasing doses of hGH administered daily (Col. 11, lines 55-60) and establishing the dosage of hGH needed to maintain target IGF-1 levels, and administering the established dose of hGH indefinitely (Col. 11, lines 60-64; claim 10, 12 and 19).

Chein also teaches a method for optimizing hGH in an adult; said method comprising determining the levels of insulin-like growth factor-1 (IGF-1, Somatomedin C) in response to an initial dose of hGH (Col. 10, lines 21-26; Table II; claim 14 (step 1)), adjusting the dose of hGH until target levels of IGF-1 are achieved by serially increasing doses of hGH administered daily for 3-4 weeks (Col. 11, lines 55-60; Col. 14, lines 44-45; Tables III-IV; claim 14 (steps 2 & 3)), establishing the dosage of hGH needed to maintain target IGF-1 levels, and administering the established dose of hGH indefinitely (Col. 11, lines 60-63; Claim 14 (step 4)). Chein teaches that the dose of hGH is to be administered at low dose-high frequency, twice daily (claim 18). Regarding the rationale for rejection on initial dose of 2 μg/kg/day- 4 μg/kg/day, and maintenance dose of 2 μg/kg/day- 4 μg/kg/day in claim 14, please see the first paragraph under 102 (b) rejection.

While Chein does not expressly teach to administer recombinant hGH at Col. 1, lines 61-64, Chein teaches that recombinant hGH is identical to natural hGH and therefore, the term "recombinant" is given no patentable weight.

The difference between the method of Chein and that of Applicants appears to be in the "daily dose", that is Chein states that hGH should be given "twice daily" while applicants administer hGH "once daily", however, hGH is still administered on daily basis and the dosage indicated is also on daily basis whether it is administered once or twice per day. Also, the doses of Chein appear to be lower than that of applicants, and deleting the term "about" in the dosage claims would overcome this aspect of the rejection.

In response, applicant indicates the claimed invention is a method of replenishing hGH comprising administering "an agent consisting essentially of hGH" and excluding other

hormones or other bioactive compounds, while Chein replenishes hGH and at least two other hormones. Applicant further indicates the claimed method of replenishing hGH is an individualized process, while Chein's method is to determine whether the IGF-1 levels have reached a pre-determined amount, then to decide whether to increase the hGH dosage, thus, Chein's method is not individualized process. The argument is not persuasive because the term "an agent consisting essentially of hGH" is recited in the claim, which indicates the inclusion of other compounds such as hormones. Furthermore, the measurement of IGF-1 levels as the response for administering hGH is used in both the claimed method and Chein's method. In Chein's method, the pre-determined amount of IGF-1 level is used as a reference point to decide whether the treatment is effective, then adjust the hGH dosage by serially increasing doses of hGH, thus, Chein's method is also individualized process. Use of "an agent consisting of hGH" would overcome this aspect of the rejection. Regarding the issue of administration of hGH on daily basis, see the discussion in the paragraph above.

Conclusion

9. No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (703) 308-9437. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-0294 for regular communications and (703) 308-4227 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Chih-Min Kam, Ph. D. CMK
Patent Examiner

KAREN COCHRANE CARLSON, PH.D
PRIMARY EXAMINER

July 2, 2002